THE STORY OF
ROBB'S

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CHAPTER 1

THE TINSMITH SHOP

The Town of Amherst just simply refused to grow up according to plan. In the late 1700's, army engineers made plans for a town site, complete with drill grounds, about a mile and a half southwest of the present location. Wars and rumors of wars occupied much of the attention of the populace and the local councils, and this had its influence on community development. Most communication was by sea, but by this time roads were making their appearance, some of them laid out by army engineers and some by grazing cows. In the year 1770, the Provincial Assembly passed an act to raise one thousand pounds by a lottery, to be spent on roads and bridges. In some cases the army provided the labor for road work as in Caesar's day.

The street we now know as Victoria was originally a highway to the Northumberland Strait, and the seaports to the east, and in the other direction, to the Basin of Minas to the south. Willow Street was the coach road to Halifax and LaPlanche Street led to New Brunswick. An earlier road in that direction ran out from what is now Eddy Street, but it was abandoned in favor of the present highway. The logical location for accommodation of the travelling public, man and beast, was at the junction of these roads and so the settlement of "Amherst Corners" came into being. At the same time, land was being cleared in the surrounding areas for agricultural pursuits and a variety of commercial enterprises started in the neighborhood of the highway junctions. New streets, such as Church and Havelock, were appearing along with churches, public buildings and schools. "Amherst Corners" became just plain "Amherst" and the site laid out by the army is now a prosperous farm. In 1842 the Anglican Church that had been built at the original townsite was moved to its present location and by 1845 Amherst had acquired a doctor, a blacksmith, a tailor, and a shoemaker. Schools, a sawmill, a flour mill, and a woodworking plant had been there for some time.

Into this bustling community came Alexander Robb, Junior. He was born in Northern Ireland of Scottish ancestry in 1827. The family arrived in Amherst in 1836 and Alexander and his brother James were apprenticed to the renowned silversmith, Amos Page. Apparently the idea of spending half a day hammering out a teaspoon from a sheet of thin silver did not appeal to

Alex Robb so, in the year 1848, he and a fellow apprentice, by the name of Frederick Bulmer, opened a tinsmith shop.

The year 1848 was a big one. Nova Scotia and New Brunswick finally, after years of argument, achieved Responsible government. In 1848, the electric telegraph line from Halifax to the New Brunswick border went into operation, and that year saw the beginning of the world renowned Robb Engineering Company.

Responsible government did not include universal suffrage. Voting was restricted to property holders and other responsible male citizens. It did mean that these voters had the last word on provincial legislation. Joseph Howe, in a speech in Amherst, stated that the telegraph line cost four thousand pounds to construct. Contrary to general misgivings, it was an immediate success, paying a dividend of five percent in its first year. It was promptly sold to a private company, who extended the lines in all directions in the province and made connections through the New Brunswick system to the rapidly expanding telegraphs in the United States.

The Tinsmith Shop, located near the corner of Victoria and LaPlanche Streets, had some trying and worrisome periods but, on the whole, it prospered and, as a matter of course, soon developed into a repair shop with a stock of general hardware including cast iron stoves for both kitchen and parlor. In 1856 the partners separated and Bulmer moved to Antigonish, where he entered into a partnership with Alex Robb's brother James.

Robb realized rather vaguely that he was stepping into the great half century of practical mechanical invention and development. The steam engine and the locomotive had already proved their usefulness. Foundries and forges were old stuff, but the machine shop as we know it today was in its infancy, waiting for a convenient source of power. For instance, the Pictou Coal Mines locomotive "Sampson", built in England in 1838, was a case in point. There was no lathe or boring mill large enough to machine the rims of the driving wheels, so the outer rim was fitted to the center part with a set of wedges, so that the rim could be centered with the axle. There was no planer to machine a nice flat surface for the outer end of the piston rod to slide on, so Mr. Watt invented an elaborate system of links to keep the rod running in a straight line. Another locomotive built in 1854 for the same mines did not have these awkward contrivances. Machine shops had grown up a bit in that period.

Inventions coming up in the near future were the Bessemer steel manufacturing process in 1855, the electric dynamo and the typewriter in 1867, the telephone in 1876, the phonograph in 1877, and the incandescent lamp in 1879. The

telegraph cable from Ireland to Newfoundland was completed in 1866, the airbrake came in 1872, the first skyscraper in Chicago in 1883, a steam turbine was built in 1884, the Dunlop pneumatic bicycle tire was patented in 1888, Edison's motion picture in 1891, Marconi's wireless in 1896, and the internal combustion engine was in the throes of torturous development.

Alexander Robb was marching into this new age with his eyes open. One thing was good and clear to him, the day of cooking and house heating with open fires was past. In his retail shop, the sale of cast iron stoves was becoming big business and they were all imported. At this time, "King" Seaman of Minudie maintained an office in Boston and conducted a thriving import, export business by schooner. Among other things, he shipped grindstones to Boston and one of the import items was the new fangled cast iron cooking stove. Amos Seaman was the man who named his corner of Cumberland County "The Elysian Fields" from the Greek Paradise or Happy Land. He ruled his territory in an autocratic way, hence the nick-name "King".

Sales of the new strange cooking stoves were slow so Seaman turned them over to his friend Robb for promotion and distribution. It is understandable that a housewife who had cooked good meals for her family in a big pot over an open fire, baking her bread in a preheated brick oven, would not take kindly to these odd looking contraptions, but Robb persisted and soon had agents working for him throughout Cumberland and Westmorland and was importing the stoves by the schooner load.

The American Civil War 1861-1865 resulted in a temporary depression in the value of the American dollar, making a very favourable import market for some time. However, the next logical step for an energetic business man was to make these stoves at home, and so, having acquired a bit of land on LaPlanche Street, the construction of a foundry was started in the year 1865.

CHAPTER 2

THE FOUNDRY

Building and operating a foundry in Amherst in 1865 was not easy. The items to be found locally were labour, lumber, the owner's ambition, and his faith in the future of the community. Just about everything else was imported, including the sand for the moulds, pig iron, and anthracite coal. These materials came up the Bay of Fundy in schooners and were unloaded onto the mud flats and carted to the foundry. As navigation was closed during the winter months, it was necessary to accumulate large stocks of these materials during the summer months.

D.W. Robb, in a speech at a staff dinner meeting in 1906 reported as follows; "The first sod was turned on May 9, 1865. Among those present was an old lady, Mrs. James Page, formerly Submit Freeman, whose early home had been on the site of the new foundry. She pointed out the location of an old well which was soon unearthed and rehabilitated." The overflow from this well can still be heard on a quiet summer Sunday trickling into the sewer. There was also an old willow tree which was used as a landmark in the deed conveying this piece of property from James Page to Alexander Robb. This tree was about at the center of the present structural shop, which was built in 1904.

This first foundry building, 1865, was 30 feet by 60 feet with a monitor roof. It was later used by the boiler makers as a flange shop and finally demolished in about 1955 to make way for the structural stock runway. At the same time, a machine shop about 30 feet square was constructed, with an engine and boiler room at the rear. The first engine was about 15 h.p. and was a constant source of trouble and anxiety. There was one other engine in Amherst at that time at the Tannery, which was located about where number 7 Havelock Street is now. In the following year, a much larger foundry was built and the machine shop facilities expanded. There was a growing demand for machine shop work from the coal mines and saw mills in the surrounding country.

At this time, the village of Amherst consisted of half a dozen stores, three hotels, five churches, the court house, county jail, and a corresponding number of dwellings. There was no railway, no bank, but there was a telegraph line. The foundry employed about twenty-five men and the value of the annual output, mostly stoves, was about $30,000. Nova Scotia had lately switched from pounds sterling to dollars.

Shipments of the new stoves were subject to the same weather conditions as the importing of the raw materials. These

stoves were distributed to the seaports of the Maritimes by schooners, which were loaded at various points on the neighboring Bay of Fundy and the Northumberland Strait. In the winter time stoves were stored in barns in the neighborhood of Amherst Shore for shipment in the spring.

In 1798 the people of Parrsboro applied to the governor and council to be annexed to the County of Cumberland. At the same time the people of Fort Lawrence asked to be included in the Township of Amherst. This request was granted about fifty years later. Previously the Parrsboro district was included in King's County. The following bit of history is taken from the Amherst Daily News of December 31, 1947.

"In December, 1868, a communication by S.M. Saxby, an officer in the Royal Navy, appeared in an English journal, in which he predicted that the earth would be visited by a terrific storm sometime between the evenings of the 4th and 5th day of October, 1869. He based his predictions on the relative positions of the sun, the moon, and the earth at that time, combined with other astronomical phenomena."

The storm occurred as he had predicted and the direction of the high wind combined with the unusually high tides of that time of year brought the level of the water in the upper Bay of Fundy to by far the greatest height on record. The harm done by the gale was not great, but the high water caused enormous damage. Dykes were washed away, the stacked hay crops were ruined and many animals were lost. A schooner being loaded with stoves in the LaPlanche River was wrecked and several men, including two of Robb's employees, lost their lives in an attempt to save it. The bottom edge of the bottom chord of the present highway bridge over the Misquash River is at the level of the Saxby tide high water. This is the tied arch span at the boundary between Nova Scotia and New Brunswick, which was erected in 1941.

The stove business continued to grow, as did the activities of the retail store and the tinsmith shop on the main street. At one period ads in the Amherst Gazette read like the kitchen appliances section of a mail order catalogue, including some articles that are not on Mr. Eaton's shelves.

In the year 1872 Alexander Robb retired because of ill health. The responsibility of running the business was taken over by his two eldest sons, David W. Robb, age sixteen in the shops and Frederick B. Robb, age fifteen in the office. They took over a going concern in sound condition and went to work with gusto. Business continued to expand and in 1877, the brothers became partners in the business and assumed full control.

Chapter 2

With their other responsibilities, these two men also looked after the promotion of sales which required frequent trips to various points in the Maritimes. Younger members of the Robb family were Walter, Aubrey, and Margaret, who later married the Rev. Daniel MacGregor.

In 1884, the Amherst Gazette reported as follows, "New Parlor Stove - Among the new styles of stoves which Messrs. A. Robb and Sons turn out from time to time, their latest stands preeminent. It is what has long been needed - an elegant parlor stove, suitable for the best room in the house, to take the place of the register grate. Among the improvements peculiar to this stove, which is called the Landsdowne, are a counter weighted front door, which acts as a blower and can be left at any height, being weighted like a window sash; handsome nickel plated ash-screen, which may be adjusted in a moment so as to form a shelf for a teapot or for the feet, and may also be placed so as to form a screen to prevent coals from falling from the front of the grate, a patent reciprocating grate, which when operated grinds up clinkers, and sifts all ashes thoroughly; perforation of outside plates of stove, bringing the air in direct contact with fire plates, which makes it a very powerful heater and ventilator, handsome nickle plated water urn on top."

CHAPTER 3

THE RAILWAY

Railways were very much in the news at that time. Nova Scotia had the line from Halifax to Truro in operation in 1858 and was busy extending it to Pictou Landing. New Brunswick completed the line from Saint John to Shediac through Moncton in 1860. The same year the railway from Montreal to Riviere du Loup went into operation. Negotiations between the Imperial government and the colonies for the construction of an intercolonial railway were being carried on interminably. In 1864, Mister (later Sir) Sandford Fleming was appointed by unanimous agreement to proceed with preliminary surveys. He was an excellent choice as he was a very capable engineer and also quite a bit of a diplomat. Because of unreasonable fears of invasion from the United States, the line was to be built as far as practicable from that country. Mr. Fleming was not at all pleased with Lord Ashburton for having given to the United States, a large section of Maine in 1842, and he said so in his final report.

With regard to the survey, he reported as follows; "On the 5th of March, 1864, the engineer left Quebec for Riviere du Loup, the terminus of the Grand Trunk Railway, to commence a reconnaissance of the country and to arrange for forwarding the supplies necessary to the prosecution of the work. These operations had to be undertaken, in a country destitute of roads, on snowshoes and on dog sleds. Nevertheless on the opening of spring, a large staff of assistants was at work at various points between Riviere du Loup and Truro."

One of the stipulations of the British North America Act of July 1, 1867, was that the railway should be commenced within six months and be finished within four years. Within a week of July 1st, Mr. Fleming received instructions from the Minister of Public Works to proceed with the surveys necessary to establish its location.

Through Nova Scotia a range of high lands known as the Cobequid Mountains had to be crossed. In 1865 every pass through these hills was examined and six lines were surveyed. Keeping in mind the needs of Springhill coal and Londonderry iron a compromise was made between two of the surveys. It was about twenty miles longer than the distance as the crow flies but some attempt was made, thereby, to ease the grades. It curled around Folly, Londonderry, and Glenholm, and for many years was known as "The Grecian Bend." Trains were running between Halifax and Saint John in 1873 and to Montreal in 1875.

Chapter 3

Mr. Fleming's description of the building of the section through Amherst is as follows:

"In November 1869 a contract was let for Division W, Contract No. 11. This division begins in the middle of the River Missiquash and includes the eastern abutment and the whole superstructure of the bridge. This superstructure is of wood, a Howe truss, with the roadway on the bottom chord. The span is 100 feet, the width between the trusses 19 feet, and the total height of the truss to the upper horizontal bracing 21 feet six inches. It is the third of the wooden truss bridges on the whole line of the Intercolonial Railway.

Although timber has been employed in spanning the river, the abutments are of substantial masonry, in every way suitable for the support of iron girders, should a spark at any time from passing trains lead to the destruction of the bridge by fire, and for a time sever railway connection between the two provinces. The masonry is built on a pile foundation properly protected by crib-work and rip-rap from the wash of the tide.

There are two aboideaux on this division, one for Gordon's Brook near the first mile, the other for the River LaPlanche about two and a half miles from the beginning of the division. The first has double and the second four sluiced passages. There was considerable sinking of embankments over places where the marshes were soft and boggy, but it was anticipated and provided for.

The division is only four and a half miles long. The work was let in November, 1869, to Messrs. Davis, Grant, and Sutherland, for $61,713.00, to be completed by September of the year following. Changes were made in the location and grades, by which, the cost of construction was increased by $8,668.24. The work was not finished until November 27, 1871. The average quantity of excavation is 37,750 cubic yards per mile and of masonry 290 cubic yards. The Resident Engineer in charge was Mr. George H. Henshaw."

The early French settlers built dykes to prevent the high tides from flooding the marsh lands. At the small rivers and brooks they built "aboideaux" into these dykes, so that the water flowing down these streams could run off at low tide and the incoming tide be prevented from flowing in again. Mr. Fleming describes them as follows:-

"In the meadow lands, or marshes, which would be covered by high tide, "aboideaux" have been built across the embankments to keep back the rising tide. They are square wooden culverts generally about three feet six inches wide, each side made of three squared logs laid transversely to the railway, the top

and bottom being of squared logs laid at right angles with the sides. The lower end for six or eight feet is four feet four inches square. Where the narrow dimensions commence, two half doors are hung horizontally, one at the top and one at the bottom, closing together tightly in the middle, the lower rising with the rising tide. They are made of hardwood in pieces bound together by copper bolts. The lower falls on a lip of wood to keep up the outer edge a few inches, and the rush of the incoming tide is sufficient to raise it to a vertical position and close it. Under circumstances where a larger sectional area is necessary for the drainage discharge, instead of increasing the size of the aboideaux, two or more are constructed side by side. In one case, at Aulac, east of Sackville, there are five. These aboideaux have in all cases been found very efficient."

When the railway embankments are subject to the action of the tides a cheap but efficient protection for the slopes has been formed by placing trees and brushwood in layers at right angles to each other with thin couches of ordinary marsh mud between them. This protection even when almost plumb on the face has fully succeeded.

In a foot note, Mr. Fleming defined the word <u>mud</u> as "The local term for the rich plastic substance thrown up by the tides of the Bay of Fundy."

CHAPTER 4

SAWMILLS AND BOILERS

The period just before and after 1880 was one of progress for the Robb Company and also for the Town of Amherst. Names such as the Christie Brothers, the Amherst Boot and Shoe Company, and the Rhodes, Curry Company, were known at that time. The Robb Tinsmith Shop and Retail Store on Victoria Street continued to flourish.

In 1879 a contract was signed by Alexander Melville Bell and A. Robb, Esquire, for the supply and installation of two telephones, numbers 77 and 84. They provided communication between the retail store and foundry. The cost was $10.00 per annum, payable in advance.

The output of the foundry continued to be mostly stoves and furnaces, and the machine shop was busy with repair work. The first complete portable sawmill was built in 1882, and a portable boiler in 1884.

The sawmill soon developed into big business and was made in three sizes, the smallest for logs up to 25 feet in length, the intermediate for logs of 30 feet and the largest for stationary mills. Auxiliary equipment, such as edgers, was also made.

The Robb Company acquired the rights to several inventions connected with the lumbering business, such as lath machines, barrel stave and heading saws, and shingle machines. The latest shingle machine was designed by the man who designed Robb's first portable boiler.

These early dreams of automation did not develop into big business since, for instance, it did not require very many shingle machines to supply the needs of the whole country.

Robb's first boiler was designed in 1884 by J.A. Mumford, an Annapolis Valley native, living in the United States. It was a light compact, fire tube boiler, very suitable for use in portable sawmills and for disposing of sawmill trash. In 1889 Mr. Mumford added a steel casing and made other improvements which added to the economy of a still portable boiler. A boiler shop was built in 1886.

To quote D.W. Robb's dinner meeting speech in 1906, "The number of hands employed in 1872 was about 25 and the working force and buildings were gradually enlarged, until in 1890, the buildings consisted of a foundry about 50 x 150 feet, a machine shop 60 x 110 feet, with woodworking shop above, occupying the whole front on LaPlanche Street, from the railway siding to the old willow tree, a boiler shop 50 x 100 feet and a warehouse (three flats) and the number of hands was about 75."

Among the personalities at the plant was Peter Nicol, who was machine shop foreman from 1875 until his death in 1886. Other foremen at that time were J. White, in the foundry, C. Campbell, in the tinsmith shop, and Tom O'Neill in the boiler shop.

In 1883 Emil Wolf began his long career at Robbs. He was born in Germany in 1860, started his apprenticeship as a blacksmith in 1874 at works of the German State Railway in Hanover. His instructor was an Englishman, who had considerable influence on Emil's career. Wolf ran Robb's forge shop with an iron hand for more than 60 years.

A telephone company, complete with switchboard, was organized in Amherst in 1884. An electric lighting plant was built in 1889, and the Amherst Fire Company was started in 1890. In 1890 Amherst was incorporated as a town and the population in 1891 was 3,781 souls. The Robb Brothers and the Robb Company were deeply involved in these events.

In 1884 Robbs entered into agreements with an Amherst resident, who signed himself J. Hodgson, machinist and inventor, to use his patents for sharpening files, grinding saws, and to make his shingle machine. They also agreed with American parties to make their chimney cowls and hay balers. In 1887 they arranged with the I. Matheson Company in New Glasgow, to have Matheson's manufacture the Mumford boiler. At certain times Robbs were not able to keep up with the demand.

In the years 1886-89 the Chignecto Ship Railway was in course of construction. Crews of men from Robbs were employed in the erection and installation of great quantities of material and machinery, when it arrived by ship from overseas, also in the construction of some parts, such as the rail diamond, where the ship railway crossed the Intercolonial. After the collapse of the Ship Railway scheme, Robbs acquired much material that was useful in rebuilding the plant after the fires. For instance, when the boiler shop lean-to was demolished in 1955, the cross beams of the hand operated overhead cranes were found to be made from the original rails of the ship railway. These were about 6" in depth and weighed 100 pounds per yard, by far the largest rails made up to 1890. They were rolled by Cammell's of Sheffield, the armor plate people.

Again quoting from D.W. Robb's 1906 speech, "In the fall of 1890, a disastrous fire destroyed the entire works with the exception of the boiler shop and the old foundry building, which was then used as a pattern storehouse. A new building was immediately erected about 40 x 140 feet, two storeys, which was used as a machine shop, with offices at the front, and has continued in use for these purposes ever since. A part of the boiler shop was converted temporarily into a foundry. In the spring of 1891 another fire destroyed the boiler shop and the foundry, which were, however, quickly replaced without a single order having been cancelled as the boiler making was continued out of doors during the summer months."

Alexander Robb died in 1891. He was 64 years old, the tinsmith shop was 43 years old and the foundry was 26 years old.

CHAPTER 5

THE FIRST HUNDRED ENGINES

On the 31st day of December in the year of our Lord One Thousand Eight Hundred and Ninety One, and in the fifty-fifth year of her reign, Queen Victoria granted a charter of incorporation to the Robb Engineering Company, Limited. The original directors were the four Robb brothers and their sister. The oldest brother, David, was 35 years old. That year, Aubrey Robb returned from MIT where he had been concentrating on Mechanical Engineering, and with Mr. E.J. Armstrong, M.E. of Erie, Pennsylvania, proceeded to organize the engineering department. Mr. G.W. Cole had joined the company as accountant in 1889.

As noted in chapter one, the electric dynamo was invented in 1867, the incandescent lamp in 1879 and New York got its first central power plant in 1881. One of these ancient power stations was still operating in downtown New York in the "Roaring Twenties" supplying its customer with direct current, which was fine for electric lights and heating gadgets, but was not so good when "Plug in" radios became popular. By 1890 every up-and-coming community wanted electric lights. Gas illumination had been in use for a long time but this was not too practical for a small town.

Robbs had been interested in steam engines for some time, buying, selling and repairing them, and they took a lot of repairing. It was time to do something about it, so they got in contact with Mr. Armstrong. It was a fortunate connection, as he turned out to be a capable engineer with sound ideas about production, etc. He also had some useful friends including Professor John E. Sweet. The Town of Erie had been building steam engines for some time. They also grew grapes and knew what to do with them. The Robb-Armstrong-Sweet Engine was born in 1891.

Robbs were very confident that they could build a better engine than the ones they were busy repairing. The tinsmith shop had been retailing engines for some time to the sawmills and small plants in the neighborhood. A municipal lighting plant had been started in Amherst in 1889, and D.W. Robb was one of the directors. In 1890, the Amherst Fire Company was organized with D.W. Robb as chief. Also, street lighting was proposed at a cost of $3.00 per pole and $7.50 per year. That year, Amherst acquired its first snow plough. These items are from the Amherst Daily News of July 20, 1949.

Before they had built one engine, Robbs contracted with the towns of Truro, Sydney, Sackville and Digby to supply them with electric lighting plants. Construction started in the summer of 1891 and the first one was delivered in October, and the others at the rate of about one per month. The cylinder dimensions were 10 1/2" in diameter with a stroke of 12". They developed about 50 horse power at 260 r.p.m. and the dynamos were belt driven. The sixth engine of this lot went to McGill University in Montreal, and in 1892 work was begun on engines for sawmills and factories.

One hundred engines were built in the next three years, in a variety of sizes, from 6" to 14" cylinder diameter and 7" to 14" stroke. The first engines were built with forged axles of the center crank design, but this was gradually superseded by the side crank, a much simpler and more sturdy type of crank shaft. A start was made, in conjunction with the electric manufacturing companies, on direct connected engines, that is engines with extended crank shafts on which the armature of the dynamo was mounted.

Of these first hundred engines, 18 were sold in Quebec, mostly retailed by the Canadian Machinery Agency, about the same number in Ontario, the distilleries were good customers, one in Prince Edward Island, two in Newfoundland, and one in Lethbridge, Alberta. The remaining engines were sold in Nova Scotia and New Brunswick for lighting plants, factories and mills. Just about this time, every up-and-coming town and city was getting the idea that it should have an electric street railway and this made a lot of work for Robbs in the next ten years.

In the 1890-95 period the design and drafting department was organized. Aubrey Robb was home from college and Armstrong was busy, at standardization. Not all of the early engines came out exactly to the drawing dimensions, but all discrepancies were carefully noted for future reference. Improvements in design were on the drawing board and Professor Sweet came up with a flywheel type of governor that was away ahead of its competition and was used without change as long as Robb Engines were built. He also took part in the design of a new slide valve, an almost frictionless valve when properly lubricated. One bad feature of early engines was the tendency of the cylinder to fill with water after it was stopped and this body of water would be pushed right through the cylinder head by the piston when the engine was started again. The new valve provided for the disposal of this water without damage to the engine.

Up until the 1880's, lubrication had been a very haphazard affair, but suddenly it became a science with long involved calculus formulae. For instance, the thickness of the slide valve was two thousandths of an inch less than the space it occupied. This was not just guesswork, but the result of careful investigation. The introduction of the electric dynamo had necessitated a careful study of main bearings, and their lubrication resulting in the "oil ring", a loose ring that revolved around the shaft, its lower part dipping into a reservoir of oil below the bearings. Many items such as this, commonplace today, were brand new when Robb Engines were young. This period 1891 to 1895 was the critical time, but the Robb Engine was a healthy baby and had good nurses, the first engines built were successful and ran for many years. Constant improvement by capable mechanical engineers brought it, by the turn of the century to the top of its field, a sophisticated piece of machinery.

At the same time the boilers were growing up. The original Mumford boiler for portable sawmills had grown into the Robb-Mumford boiler for stationary power plants and was further expanded and improved under the name of the Robb-Mumford-Brady Boiler. H.V. Brady started work in the boiler shop in 1889 and became foreman in 1894. One of his assistants was John O'Neill, who succeeded him as boiler shop superintendent in 1907. Other personalities of the time were J.H.V. Moore, Sales; Charles L. Purdy, Estimating; James L. MacLean, Engine Erection Superintendent; and J.K. Tufts, Draughting Department.

Bicycles, as we know them today, were coming into use at that period and were a "hot number" in the retail store.

CHAPTER 6

THE CORLISS ENGINE

In the period 1896 to 1903 Robbs built about 500 engines still in a large variety of sizes from 5 x 6, to 20 x 20 inch cylinders, including about 70 compound engines. There were a few specials. Some small engines were mounted on the top of portable boilers. In 1897 two locomotives were built for a logging company in Yarmouth County. The rims of the wheels were constructed so they would run on a track made of logs. Engines were sold in pairs to provide power for hoisting machines and dredges. The increasing use of mechanical stokers in the larger boilers called for a source of power to operate them and small Robb engines mounted on the side of the boiler provided this.

In an ideal steam engine cylinder, the inlet port would go from completely closed to completely open instantaneously at the start of the piston's stroke, remain open for a quarter or a third of the stroke, depending on the load, and then instantly close. The piston would continue its stroke impelled by the expanding steam. At the end of the stroke the exhaust valve would open, also instantly and remain open for most of the piston's return stroke.

The slide valve is operated by an eccentric on the crank shaft and the point of closing of the inlet port is controlled by the governor in the flywheel. By its very nature, the slide valve is inefficient resulting in a cylinder operation far from the ideal. In 1849 Mr. G.H. Corliss of Providence, Rhode Island designed a steam cylinder with four valves, an inlet and an outlet valve at each end of the cylinder. The linkage that operated these valves was an elaborate affair with a trigger action and springs for the return motion, but it did approximate the ideal valve action for an efficient steam engine. The big drawback of the Corliss Engine was the limitation of its speed to about 75 revolutions per minute. Its usefulness was confined to the larger engines of 300 h.p. or more. Higher speeds were required for the increasing number of engines that were directly connected to electric generators. In many cases the armature of the generators was built right on the engine crank shaft.

In the late 1890's Armstrong and the design staff went to work on the Corliss idea. After a lot of sweat and tears, and experimentation they came up with the Robb-Armstrong-Corliss Engine. The trigger action and the springs were eliminated and the allowable speed was increased to that required by the generators, and the "ideal" valve action was maintained. Another speed limitation on this type of engine is the rim speed of its large cast iron flywheels. These are made large and heavy to increase the evenness of rotation, but if they rotate too fast they will fly to pieces, the greater the diameter the fewer the revolutions per minute. A rim speed of a mile a minute is the safe limit for cast iron.

The first Robb-Armstrong-Corliss Engine was sold to the T. Eaton Company in Toronto in October 1903. Its cylinder was 20" in diameter with a stroke of 24". A 225 kilowatt generator was built right into the engine. It turned at 175 revolutions per minute. Mr. Eaton was either a good gambler or else he had faith in the Robb products. Of course, they were sold under a "money back if you're not entirely satisfied" guarantee. There were already nine Robb Engines in the Eaton store in Toronto driving fans, pumps and generators. In the period from 1895 to 1910, the Eaton Company purchased 24 Robb Engines, 14 in Toronto, 8 in Winnipeg, and two in Moncton, some of these engines were quite large, occupying a floor space of about 15' x 25' with a 300 kilowatt direct current generator built into them. To quote a letter from Mr. Whytock of Eaton's staff, April 1967, "The Robb Steam Engines were used to provide D.C. power for the store and factories up until hydro conversion in 1954. Two machines were in use until 1957 for fire pumps and standby power in the boiler room."

In about the same period the Canadian Pacific Railway bought 54 Robb Engines, mostly in the smaller sizes, to operate fans, pumps, generators, etc. in their hotels and workshops.

This was an era of experimentation in steam engines especially in the multi-cylinder types. In a so called compound engine (two cylinders) the steam at boiler pressure entered a small cylinder and was exhausted from it at about half pressure. This steam then entered the larger cylinder where all its pressure was used up. These compound engines were made in a great variety of shapes and sizes. In some cases the two cylinders were on the same piston rod and were called "Tandem". In some cases the cylinders were on separate crank rods with the cranks an ninety degrees from each other. These were called "Cross Compound Engines". Many of the cross-compound engines were "Vertical" with the cylinders up in the air and the electric generator between them. Some engines had slide valves and some Corliss Valves. There was also a lot of experimenting with cylinder dimensions. The larger engines were Custom Built and the buyer had a choice of shapes and sizes.

One of the largest stationary engines built at Robb's went into the electric power plant for the City of Saskatoon in 1911. The high pressure cylinder had a diameter of 30", the low pressure cylinder 48" and the stroke was 26". It was Vertical Cross Compound Corliss and stood about 20' above the floor,the top of the foundation at floor level was 20' x 29'. The flywheel was 12' in diameter and weighed more than 10tons. The engine was of the side cranks type with crank discs affixed to each end of the shaft which weighed about six tons. There is no record of the total weight of the power plant. It developed about 1,000 h.p. The 975 K.V.A. generator was built by the Canadian General Electric Company. The generator's outer casing was about 16' in diameter.

The main bearings were babbitted and water cooled. In this engine they were 14" in diameter and 26" long. They were designed by Mr. James L. MacLean, when he was assistant superintendent of the works. A simple adjustment takes up any wear, and engines with these bearings have been known to run for 50 years without any rebabbitting.

The Saskatoon engine had a platform built around the cylinder 14 feet above the floor. It was about 10 feet wide, and 28' long. There were permanent stairs to it with landings at the crosshead bearings. This engine was ordered with special finish, the flywheel rim was polished as were all exposed rods and links and the platform handrail. All castings were to be clean and smooth. The generator maker sent gauges of the bore and keyway of their armature so the crank shaft could be made to an exact fit.

In the 1898 to 1905 period 25 engines were shipped overseas. These were medium sized tandem slide valve engines directly connected to electric generators. Four engines went to Trinidad, three each to Spain, Cuba, and Demerara, two to Brazil, one to Australia, and the balance to England. One of these went to the Technical School in Manchester and three to provide power for the Isle of Mann Tramways.

In 1904 a small vertical engine was introduced with six inch to eight inch cylinders. They developed about 15 to 30 h.p. and soon became popular for driving, through a belt, the line shifts of small factories and they were also directly connected to electric generators, fans, and pumps.

In 1905 a simple engine with a 24" cylinder developing 400 h.p. weighed about 35,000 pounds and retailed for $4,000.00. Cast iron was not expensive in those days, so they didn't skimp on it.

The quarter century period from 1890 to 1915 was the era of the steam engine. The world was hungry for a practical small power plant and the Robb product was at the top of the class. However, the technological progress that made the reciprocating engine also brought about its demise by developing the steam turbine, alternating current with its high voltage power lines, and the internal combustion engine. The Hon. C.A. Parsons had been experimenting with turbines for some time and in 1897 built the "Turbinia", apparently at his own expense. This was a ship about 100 feet long and had about 2,000 h.p. in steam turbines. The British Navy designers were impressed and proceeded to accelerate the experimental work. Their chief interest was in the shape of the turbine. Their existing power plants stood up about 40 feet above the propellor shaft and the turbine fewer than ten feet. They were thus well below the water line and not vulnerable to enemy shell fire.

After 1912 there was a general slackening of new construction and this had an adverse effect on the sale of engines and power plants. The Great War 1914-18 brought on an artificial boom and the Robb Company was busy at munitions and other needs of the armed forces. The Canadian Forestry Corps took several Robb sawmills to Scotland, complete with engines and boilers.

During the latter part of the war, the French Government ordered ten 875 h.p. marine engines. They were triple expansion (three cylinders), the stroke was 24" and the cylinder diameters were 10", 16½" and 26½".

Robbs also built two engines for ships which were being constructed at Trenton. They had a 33" stroke and the cylinder diameters were 17½", 28¾", and 47". Seven similar engines were built for the Imperial Munition Board in this period. They had a stroke of 40" and the cylinder diameters were 20", 33" and 54".

In 1918 the Canadian Government embarked on the organization of a Canadian Merchant Marine. Two of the ships in this scheme were built in Halifax and were powered by Robb constructed engines. The stroke was 48" and the cylinder diameters were 27", 44" and 73".

None of these large engines were designed by Robbs, but were built to drawings supplied by the customers. The engine business wound up with a flourish.

CHAPTER 7

FOREIGN AFFAIRS

The career of the Robb Engine was brilliant but comparatively short-lived, from 1890 to 1920 as told in Chapters 5 and 6. The Robb Boiler business was not as glamorous but had a much longer life. As told in Chapter 4, the first sawmill boilers were built in 1884, and this business continued to expand until about 1910, and carried on until 1950. The foundry, started in 1865, also continued in business until 1950. It grew in capacity as the engines grew in size and the casting of a 10 ton flywheel, (they were still called 'pulleys'), while never a routine job, was accomplished without trouble.

The year 1904 was one of expansion, the new machine shop was built that year, 250 feet long and 50 feet wide with a two storey ell 50 feet wide running its full length. The main shop had a 25 ton travelling crane about 35 feet above the floor. This building is still the most impressive one in the plant. A new foundry was built at this time 100 feet x 50 feet with a 15 ton crane and a similar crane was added to the boiler shop which had been built in 1891.

About this time Robbs became involved in an American affair. In the New Year Edition of the Amherst Daily News, December 31, 1947, Mr. Ronald M. Ross of the news staff wrote a story, commemorating Robbs century of existence from information supplied to him by Mr. J.F.F. MacKenzie. With regard to the American episode he wrote as follows:- "The Amherst Industry took on international significance in 1902 when a company was formed in the United States known as the Robb-Mumford Boiler Company to carry on the activities of the parent Canadian plant across the line. This move was made necessary by the high tariffs imposed by the United States against the foreign made machines such as boilers and engines. In the next three or four years it was discovered that the plant that Robb had purchased from Edward Kendall and Sons of Cambridge, Massachusetts and known as the Charles River Iron Works was inadequate for the work anticipated by the Robb-Mumford directors. The Iron Works was established as far back as 1860 to take care of American developments. Robb decided to build an entirely new plant, purchased ten acres of ground in South Framingham, Massachusetts, and a modern boiler manufacturing plant was laid out and constructed at a cost of $500,000. The management and directors of the Robb-Mumford Boiler Company at this time included President D.W. Robb, Secretary-Treasurer G.W. Cole, General Manager, Frederick H. Keys, M.E., Superintendent I.I. Wilde and directors were D.W. Robb, R.C. Harris, W.R. Ross, W. Max Aitken (now Lord Beaverbrook) and J.A. Mumford. This plant was operated successfully for a number of years and then sold to a group of American industrialists who have continued its operation to the present."

The above is in the nature of an epitaph. The real story and the reasons for this adventure are not clear. J.A. Mumford, the designer of the first Robb Sawmill boilers, was living in New York and probably had considerable influence. He was one of the original directors of the American Company. There was considerable activity in stock trading and the Halifax Investment House stood to profit handsomely if the company was a success. Several prominent Amherst businessmen bought shares. The Manager, F.H. Keyes of Boston, took part of his pay in stock. A three-year agreement gave him $2,500. in cash and $1,700. in stock for each year. In 1904 the Framingham Board of Trade raised $4,500. among their members and presented it to the company on the condition that the company would build a plant in their town and employ not less than 50 men whose average wage would be $2.25 per day. Agents were appointed to cover the Eastern States and contracts were signed with the owners of patents concerning improvements in steam boilers. The new plant in Framingham was strictly a boiler shop, no Robb engines were built there. J.A. Mumford died in 1909. Business was not good in 1911 and in 1912 both the Amherst company and the Framingham company went through liquidation proceedings. The Framingham plant was taken over by local interests who have operated it successfully since then. The affairs of the Amherst plant were taken over by Messrs. Lovett and Cahan and continued under their administration through the war years and until 1923 when the plant was taken over by the Dominion Bridge Company.

The Great War 1914-18 brought an artificial prosperity to the country. Shortly before the war the Steel Company in Trenton, Nova Scotia had acquired a huge hydraulic press made in Germany. It was suitable for the forging of propellor shafts for ships and that type of work. In the autumn of 1914, this company forged artillery shells to demonstrate to the newly formed Imperial Munitions Board that they could do it, even though it was, as the manager stated, like driving tacks with a sledge hammer. This immediately provided work for the machine shops in the surrounding country that had been feeling the effects of the depression. Machinery manufacturers in the United States were overstocked and were able to supply the local people with turret lathes to be used in machining the shells. Other equipment was made on the spot and by the spring of 1915 Robbs were in the shell business in a big way. Soon the growing Merchant Marine and the Navy were calling for equipment and the Robb plant was in a good position to supply this stuff. During the engine building period a good line of other engine room equipment had been developed, such as; feed water heaters, and steam separators. The Robb staff's experience was very useful at this time.

As mentioned in the previous chapter, marine engines were constructed during the war and the boiler shop also had a busy time. Many marine type boilers were made, including several for the U.S. Merchant Marine. These were installed in ships at Savannah, Georgia, and men from the shops went there to keep an eye on them.

A fire in the basement of the office destroyed records of the early boilers. Also, the men who made them have now all been gathered to their fathers so a detailed story is not possible.

An elaborate catalog of steam boilers issued about the turn of the century has a frontispiece from Kipling (1893), that reads as follows: "I mind the time we used to pack a bursten main wi' tow, Ten pound was all the pressure then, EH! Eh! -- a man wad drive; An' here, our workin' gauges give one hunder' twenty-five! We're creepin' on wi' each new rig--less weight an' larger power." --"McAndrews Hymn"

Another paragraph in the same "News" article read as follows, - "The manufacture of the Robb-Baker Tillsoil tractor got under way in 1916 amid great promotional activity and a wide spread campaign of advertising. Special attention in this respect was given to Western Canada and sales offices were opened in Winnipeg, Vancouver, and San Francisco, Hundreds of the machines were produced and the kerosene powered tractor worked like a charm, in fact some of the machines are still working on farms not so remote from the Town of Amherst, but Robb's campaign for its tractors was a little too late. The advent of farm tractors as turned out in mass productions by large automobile firms of the United States sounded the death knell of this Canadian built tractor and the final manufacture of these machines was abandoned around 1921. Nevertheless, the Robb-Baker tractor was an excellent machine with many unique advantages."

"Scoop" Ross of the "News" was letting us down easy. Someone has said that the camel is a horse designed by a committee. This seems to fit the Tillsoil, the two cylinder, horizontal, valve-in-the head kerosene engine was designed by steam engine experts, the frame and wheels by the boiler makers, the drive wheels, flat steel, about five feet in diameter and a foot wide had clips so that another six inches of width could be added with two inch angles across the face of the wheel to provide traction. The steering wheel had a crank handle on it to help with the steering. The Tillsoil was a monstrosity and anyway it appeared about thirty years too late.

CHAPTER 8

THE PEOPLE

One of the reasons for Robb's success in the building of engines and boilers was the apprenticeship system. This is of ancient origin dating back to the Romans, although Roman Law is silent on the subject. It flourished in England and Europe in the middle ages, a boy would be indentured to a craftsman at an early age. He lived with his master for a period of seven years, generally, and in due course became a master craftsman in his own right. It was considered that in seven years the lad could do enough useful work to reimburse his master for the time spent in his training. Reading, writing and arithmetic were not considered necessary parts of his training, except in certain trades.

In 1562, laws were passed in England limiting the practice of a trade to graduate apprentices, but these laws were repealed in 1814, excepting in the trades of law, medicine and the clergy. The advent of the machine age, the factory, and later on compulsory education brought changes to apprenticeships. By the 1890's, the Robb apprentices were limited to ten hours a day for six days a week. They started at five cents per hour pay and this was gradually increased during the course. Sunday was a day of rest and quiet, and this did not leave much time for protest marches and that sort of thing. There was a certain amount of horseplay in the plant during working hours and an occasional accident resulting from it.

When an apprentice had completed one year successfully, he was promoted to 59 hours a week, instead of 60, at the same weekly pay. He was let off at 5 o'clock on Saturday afternoon. A graduate machinist worked a ten hour day for $3.00. These courses were carried on in the boiler shop, the foundry, the machine shop, the pattern shop and the drafting department. The provincial government provided evening courses in several subjects, such as drafting, bookkeeping and dressmaking, and an ambitious apprentice would enroll in the drafting course, two nights a week. The fee for the term was $3.00, which was returned to students with a good attendance record.

These young men got good training. They went out into the world into good positions, mostly to the "Boston States" and became shop superintendents and plant managers. To be a Robb graduate was something to be proud of and in the meantime they built the Robb engines and boilers at a very low labor cost.

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One youth who didn't have time for courses was J.H.V. (Johnny) Moore. He started work in the tinsmith shop in 1881. He soon showed an aptitude for sales and went on the road selling Robb products throughout the Maritime Provinces. One of his specialties was bicycles. The bicycle, as we know it today, came into being in the 1890's, with the advent of the ball bearing, the sprocket chain and the coaster brake. Sometimes Johnny would take his wife along with him to demonstrate how useful a bicycle was to a busy woman, and as a pleasant recreation.

Sawmills, engines and boilers soon became Johnny's stock in trade. He was also an expert cribbage player and occasionally a sale would require him to stay with a prospect for a couple of days to play cards. There was often a trade involved in the sale. He had to know a good horse when he saw it, also apples from the Annapolis Valley and oysters from Northern New Brunswick. When the oysters went to $8.00 a barrel he stoped taking them. There is a story that at one time he was in correspondence with a customer in Digby County. With his paraphernalia, he took the train to Digby, hired a team and when he arrived at the prospect's home, he discovered he had been corresponding with a ten year old boy.

Another well remembered gentlemen was John O'Neill. He was born in Ireland and came to Amherst at an early age with his family. His father, an ex-soldier, tried his hand at farming, had a trip to the West and finally settled in Robb's boiler shop. John started work there in 1887, thirteen years old, and became foreman in 1907, upon the retirement of H.V. Brady, from whom he had learned many useful things, how to make an involved layout with a piece of chalk on a sheet of steel, how to ease through a manhole without getting hurt, and how to run a boiler shop. He nursed the shop through the excitement of two world wars and also through the slack periods between. In 1943, Emil Wolf had been employed with Robbs for sixty years and it was decided that he should be presented with a suitably engraved gold watch. However, because of the fear that he would be perturbed, thinking that they might be hinting at his retirement, it was decided to present John O'Neill with a watch at the same time, even though his mere fifty-six years with the company did not quite rate a watch, just yet. The ceremony came off without a hitch in Mr. MacKenzie's office, with suitable speeches, including one by the mayor of Amherst. Both Mr. Wolf and Mr. O'Neill retired soon after this because of ill health.

Another man who survived the bad years was Sylvanus Burgess. He came to Robbs from Hantsport in 1897, as a man who knew about sawmills. He was foreman of one department of the machine shop and he carried on as head of the machine shop through the lean years. He retired in 1936.

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Leon Rockwell started work in the foundry in 1898, became foreman in 1917 and he carried on through the lean years. The pattern shop dwindled to a one man shop about 1920 with Charles Urquhart as the sole survivor.

About this time, Robbs came under the wing of the Dominion Bridge Company. They were not particularly interested in maintaining a plant in the Maritimes and steps were being taken to close Robbs down. However, influence was brought to bear on the parent company, so that it was kept alive with a minimum of staff. Mr. Cole remained as manager with John Devenne doing the bookkeeping and the above mentioned shop foremen looked after any work that happened along. The company provided any necessary light and power. When a machine broke down or a roof caved in, it stayed that way. Some structural steel was fabricated in the boiler shop and Arthur Brownell acted as erection foreman. Art was an experienced boiler assembler and was apt to attempt to erect a steel frame without paying too much attention to the erection drawings with sometimes awkward results. Also, his equipment was antiquated, resulting in a lot of backbreaking struggles with the beams and columns.

Good times were returning in the late twenties, and the Robb plant was not taking part in it, so in 1928, Mr. J.F.F. MacKenzie of the Dominion Bridge Lachine staff was sent to Amherst to organize a structural department. Mr. D.H. Colville from the Toronto plant was installed as plant superintendent. Gradually a design and detail department was organized in the drafting room, and in time Robbs became a full fledged branch of the Dominion Bridge Company.

This is the "Story of Robbs."

Norman Ritchie

DEED

JAMES E. PAGE TO

ALEXANDER ROBB JUNIOR

Know all men by these presents that Mr. James E. Page of Amherst in the county of Cumberland and Province of Nova Scotia, Yeoman and Submit his wife, for and in consideration of the sum of four hundred dollars of lawful money of the Province aforesaid, to be paid by Alexander Robb Junior of the same place, Merchant, the receipt whereof we do hereby acknowledge, do by these Presents give, grant, bargain, sell and convey unto the said Alexander Robb Junior, his heirs and assigns, a certain parcel of land situate in Amherst aforesaid bounded and described as follows viz.

"Beginning at a stake on the East side of the Fort Lawrence road near the Westerley side of a large willow tree thence North forty six and one quarter degrees East five chains and fifty one links to a stake, thence South forty three and three quarters degrees East three chains and sixty three links to a stake, thence South forty six and one quarter degrees West five chains and fifty one links to a stake on the East margin of said road and thence North forty three and one quarter degrees West three chains and sixty three links along said road to the place of beginning, containing two acres together with all the privileges and appurtenances to the said land in anywise appertaining and belonging."

To have and to hold the above granted premises to the said Alexander Robb Junior, his Heirs and Assigns, to his and their use and behoof forever. And I the said James E. Page for myself, my Heirs, Executors and Administrators do covenant with the said Alexander Robb Junior, his Heirs and Assigns, that I am lawfully payed in fee of the afore granted premises; that they are free from all incumbrances; that I have good right to sell and convey the same to the Alexander Robb Junior as aforesaid, and that I will and my Heirs, Executors and Administrators shall warrant and defend the same to the said Alexander Robb Junior, his Heirs and Assigns forever against the lawful demands of all persons.

In witness Whereof we have hereunto set our hands and seals this Twentieth day of April in the year of our Lord One Thousand, Eight Hundred and Sixty Five.

Signed, Sealed and Delivered) James E. Page
)
in the presence of Fred W. Bent) Submit Page

Cumberland J.P.

I the subscriber, one of Her Majesty's Justices of the Peace for the County of Cumberland do certify that on the Twenty first day of April in the year of Our Lord one thousand, eight hundred and sixty five, Submit Page, wife of James E. Page, whose name is subscribed to the within indenture, personally came before me separate and apart from her husband acknowledged that she did freely, voluntarily, and without compulsion from him, sign seal and as for her own act and deed did deliver said indenture, and did thereby release, remise, and relinquish all his interest, claim and rights of dower which she had or could have into of upon or out of the lands described in said Indenture of Alexander Robb Junior, his heirs and assigns.

W.O. Cutten,JP.

Province of Nova Scotia Office of Registry of Deeds

Amherst, N.S. Twenty-Second day of April, 1865

Cumberland J.P.

I certify that Fred W. Bent, the Witness to the foregoing deed appeared before me this day and being duty sworn made Oath that he is such Witness and that the same was extended to James E. Page in his presence.

James E. Purdy,

Registrar

- B -

SOME EXTRACTS FROM

JOSEPH HOWE'S SPEECH

At a dinner given to him by about 230 of his constituents at Amherst in 1854, as reported by William Annand.

VOLUME 2, PAGE 168

"I turn now with pleasure from mere personal defamation to the general charges which the opposition bring against the government. You hear it complained from day to day that it has ruined the Province. You look around upon a smiling and prosperous country and know that charge to be groundless. Never, within my memory, was Nova Scotia more prosperous. The breadth of cultivation is everywhere extending. New farmhouses, barns, and mills are going up in all directions. The internal trade is active; new ships are being built all around the coast, and our mercantile marine is profitably employed. Bad crops have but quickened the industry of the people. Prices are good, wages good, and the people cheerful. Where do the Tories find evidence of ruin and decay? Not in Cumberland, I am sure ----------. Look at the edifice behind us, as large as all the old hotels put together. ---------- Look at the Post Office. A few years ago you paid nine cents on a letter from Amherst to Halifax. ----------Now you send one all over the Province for three cents.---------- For years Cumberland paid light duties, and yet had not a lighthouse on either of her coasts. Now a new lighthouse at Parrsboro, built last year, sends its beams far out over the Basin of Minas, and we must have another at Pugwash by and by. For twenty years a bridge across the River Philip had been talked of by the people and promised by the Tories. They would have promised it for twenty years more. Fulton and I provided for it the very first session that we represented the county together. Already are the piers completed, and by the end of September the whole will be done. The House gave us £300; the bridge will cost £1,600, but before the end of autumn we shall have the happiness to comtemplate the finest public work ever constructed in the county. ----------Bent's Hill, the worst upong the past road, has been altered."

The balance of the speech concerned the sad story of why the railroad was not yet built. - (It was finally completed in 1873.)

- C -

CANADA

Province of Nova Scotia

VICTORIA, by the Grace of God, of the United Kingdom of Great Britain and Ireland, Queen, Defender of the Faith, &c., &c., &c.

To all to whom these presents shall come, or to whom it may in anywise concern, GREETING: Whereas, in and by a certain act of the Parliament of Nova Scotia, known as "The Nova Scotia Joint Stock Companies' Act," it is, amongst other things, in effect enacted, that the Governor in Council may, by letters Patent under the Great Seal of the Province, grant a Charter to any number of persons, not less than five, who shall petition therefor, constituting such persons and others who may become shareholders in the Company thereby created, a Body Corporate and Politic, for any purposes or objects to which the Legislative authority of the Parliament of Nova Scotia extends, except the construction and working of Railways and the organization of Loan Companies; AND WHEREAS, David W. Robb, Frederick B. Robb, Walter R Robb, Aubrey G. Robb, and Margaret A. McGregor, have petitioned for a Charter under the said Act, constituting them and such others as may become shareholders in the Company thereby created, a Body Corporate and Politic under the name of "Robb Engineering Company (Limited)" for the purposes hereinafter mentioned, and have established to the satisfaction of the Provincial Secretary of Nova Scotia (no other officer having been charged by the Governor in Council to report thereon), due compliance with the several conditions and terms above referred to: AND WHEREAS, among other things, it is in the notice of this Application, and in the said petition, averred, and it has been established, that the amount of the Capital Stock of the intended Company is One Hundred and Fifty Thousand Dollars, divided into fifteen hundred shares of one Hundred Dollars each. That the number of shares taken and subscribed is Seven Hundred and fifty and the amount in cash paid in thereon is Seven thousand five hundred dollars NOW KNOW YE, That by and with the advice of our Executive Council, and under the authority of the hereinbefore in part recited Act, and of any other power and authority whatsoever in us vested in this behalf, We Do, by these our Letters Patent, constitute the said David W. Robb, Frederick B. Robb, Walter R. Robb, Aubrey G. Robb and Margaret A. McGregor, who are the first on Provisional Directors of the said Company and all others who may become shareholders in the said Company, A Body Corporate and Politic, by the name of Robb Engineering Company (Limited) with all the rights and powers given by the said Act, and for the purposes of carrying on the business of iron and brass founding and general engineering, and the manufacture of marine, stationary and portable steam engines and boilers, tug boats, small steamers, steam

and other pumps, steam fire engines, mining pumps and machinery, gas works, water, works, ship castings and iron works, railway rolling stock, sawmills, wood working machines and general machinery, steam and hot water heating apparatus, furnaces, cooking and heating stoves and general castings or any other operations or manufacturing pertaining to the business. The manufacturing of machinery, apparatus and instruments for the production and distribution of electricity for the purposes of light, heat and power, and all machinery, apparatus and instruments whatsoever by which electricity maybe utilized. The manufacturing of telephones and other apparatus connected therewith and their appliances and other instruments used in connection with the business of a telegraph or telephone company; and also such other electrical instruments or plant as the said Company may deem advisable. The construction, erection and maintaining of a line or lines of telephone, and for conducting electricity for the purposes of light, heat or power, by overhead wires on posts or otherwise, along the sides of and across or under any public highway, streets, bridges, waters, watercourses or other places. The acquiring all lands and the erection of all buildings and plant necessary for carrying out any or either of the aforesaid objects.

That the place within the Province of Nova Scotia which is to be the chief place of business of the said Company, is Amherst in the County of Cumberland.

THE CAPITAL STOCK of the said Company shall be one hundred and fifty thousand Dollars divided into fifteen hundred shares of one hundred Dollars each, subject to the increase of such capital stock under the provisions of said Act.

PROVIDED ALWAYS, that nothing in these presents, expressed or contained, shall be taken to authorize the construction or working of Railways, the business of Banking, or of Loan Companies, or issue of paper money, by the said Company.

IN TESTIMONY WHEREOF, we have caused these, Our Letters, to be made Patent and the Great Seal of the Province of Nova Scotia, to be hereunto affixed.

WITNESS, Our trusty and well-beloved Ualachy Bowes Daly,
Lieutenant Governor of the Province of Nova Scotia

AT OUR GOVERNMENT HOUSE, in the City of Halifax, this thirty-first day of December in the year of our Lord One Thousand Eight Hundred and Ninety-One, and in the fifty-fifth year of our reign.

By Command,

W.T. Frieding, W S Fielding

Provincial Secretary

CONSTITUTION AND BY-LAWS
of the
ROBB ENGINEERING CO'S
MUTUAL BENEFIT SOCIETY

Organized June 13, 1890

We, the manufacturers and workmen, agree to form ourselves into a Society for the relief of our members in case of sickness, and for the purpose of protecting our interests as employers and workmen.

CONSTITUTION

ARTICLE 1. Name

This Society shall be known as the Robb Engineering Co's Mutual Benefit Society.

ARTICLE 11. Members

Any person who is employed by or a member of the firm of Robb Engineering Company, Limited may become a member of this Society by making application to the Sick Committee or Officers, and if accepted by them shall continue a member and participate in the benefits so long as he remains an employee or member of said firm and in good standing in the Society. An employee must be in the employ of the Company three months before becoming eligible for membership.

ARTICLE 111. Officers

Sec. 1. The officers shall consist of President, Vice-President, and Secretary-Treasurer, all of whom shall beelected by ballot annually.

Sec. 2. The President or vice-President shall preside at all meetings.

Sec. 3. The Secretary shall keep an account of all funds and pay them out on the order of the President and Sick-Committee, for which service he shall be exempt from all dues and assessments, and shall receive such salary as the Society shall determine.

ARTICLE 1V. Meetings

Sec. 1. The regular meetings shall be held on the second Monday of January, April, July and October, when the Secretary shall present a statement of the funds and any other business may be discussed and voted upon. Special meetings may be called at any time on the requisition of seven members.

Sec. 2. Seven members shall form a quorum.

ARTICLE V. Finance

Sec. 1. The initiation fee of this Society shall be 50 cents for members receiving over $5.00 per week wages, and 25 cents for members receiving $5.00 or less per week.

Sec. 2. The relief fund to be raised in the following manner: Twenty-five cents per month to be deducted, on the first pay day of month, from the pay of each member who is a workman and receives over $5.00 per week wages, and 13 cents per month from each member who receives $5.00 or less per week. This fund to be deposited with the Robb Engineering Company. The employers to place to the credit of the same fund ten per cent of the amount collected from the workmen. The said fund to be controlled and voted by a two thirds vote at any regular or special meeting called for the purpose. Whenever funds get lower than $25.00, double assessments may be levied until we have $50.00 on hand.

Sec. 3. Every member in good standing if rendered incapable of following his usual occupation by sickness or disability, not proceeding from drunkenness or other immoral conduct on his part, shall receive the benefits of the Society for a term not exceeding twelve weeks in a period of twelve months, commencing one week after date of their sickness (providing that the Secretary or any of the officers have been notified inside the first week of sickness). In the event of a sick or disabled member wishing to leave town, he shall with one or more of the sick committee, consult a doctor at his own expense, and obtain a certificate stating the probable duration of such sickness or disability, benefits to be stopped at end of such time as doctor's certificate states, unless the member reports satisfactorily to the sick committee.

Sec. 4. A member paying 25 cents per month who is entitled to the benefits of the Society shall receive $4.00 per week, after the first week. Members paying 13 cents per month shall receive half above amount.

Sec. 5. A member who shall feign illness for the purpose of receiving pecuniary benefits may be expelled by a two-thirds vote of the members present at any regular or special meeting.

ARTICLE 6. Sick-Committee

A Sick-Committee shall be appointed to consist of five members to be elected by ballot quarterly, whose duty shall be to visit all sick members and report to the President. In any case where the Committee cannot agree as to the genuineness of any claim presented, they must call a special meeting of the Society.

ARTICLE 7. Duty of Members

It shall be the duty of each member to attend all meetings of the Society and when sick to report to the Sick-Committee or one of the officers within the first week of sickness.

ARTICLE 8.

Any difficulty which may arise between employers and employees which cannot be settled in the ordinary manner by the parties interested, to be settled by arbitration, one arbitrator to be selected by the workmen, one by the employers and a third by the two selected, and we members agree to abide by their decisionof such arbitration.

ARTICLE 9. Amendment

Any part of these By-Laws can be repealed or amended by a two-thirds vote of the members present at a regular meeting, after one months notice has been given in writing.

- E -

GERALDINE MOORE'S STORY

My father, J.H.V. Moore, was born in 1863. He said when he was a boy of 18 he came from Shinimicas to work at, what I thought was Robbs Tin Shop on Victoria Street, between LaPlanche and Eddy, but you could find that out. Wherever it was, Robbs sold bicycles and also had maple sugar; I suppose the farmers exchanged it for something. They found my father could sell, so they sent him out on the road to sell bicycles. Robbs asked Mother to ride a bicycle to show the ladies of the Town that it was the thing to do, so she learned and rode alone some, and with my father through to Port Elgin. Sometimes they would go over and back in an evening. They said the road was good. They had a seat fitted to the handle bars and the first born could be strapped in, no doubt like a car seat. Father's brother, Alfred, had a farm in P.E.I. Mother thought she was the first woman to ride a bicycle in Nova Scotia, or perhaps the Maritimes. Once when she took the bicycle off the train in Springhill the trainmen wouldn't start the train until they had all watched her go. She waited and they waited, until my father made her start. She was so embarrassed at all the people looking at her she said that was the last time. Mother wore a long divided skirt, jacket and small sailor hat, all like a horse riding costume. I have a photo of her with a bicycle; we used to have one of Dad.

One time my father remarked that D.W. had cut the string. It seems he was out back in the receiving room where parcels arrived and they used to wind the cord into balls and save it. D.W. Robb came out took one and cut the string. My father said, "Oh, you're going to cut?" D.W. said, "Well I lost the string that time, but we'll save the pins." There was a History of Robb "Under Two Flags" we had one in Amherst;I expect you have seen it.

As for his business at Robbs, I know nothing. Someone down there told him they guessed he had sold all the boilers and engines that were sold in the Maritimes, in one year, but one. He wanted to sell on a commission basis once, but they wouldn't let him. Sometimes a sale could be made over a game of cribbage. My father liked to play cribbage. When one of his customers found it out he invited him over to his house to play. After a day or two had passed Dad said, "Well we haven't settled anything yet, I've been around here long enough; I can't stay any longer as I've got to get back." The old gentleman said: "Now don't you worry about that I'll look after it all; you'll get your order all right we've got to have another game of cribbage." So my father said to himself: "Well all right, but the longer I stay around here the more it's going to cost you, I'll just tack it on to your bill. He said the old fellow was enjoying himself and had lots of money.

Robbs always asked him to stay at the best hotel if there was a hotel. One time in an outlaying district a lady put him in what he thought was a damp room he just turned down the sheets, took off his trousers and coat, put on his long raccoon fur coat that reached to his ankles, turned in and slept all night. Boots and all my mother said. In those days he wore solid wool felt soled, and wool felt upper boots when he went "Up North" they were warm and it did not freeze and thaw as in later years. This direction meant he would be away two weeks, and cover the Newcastle, Bathurst, Campbellton, Dalhousie and perhaps the Metapedia Valley area travelling out to lumber camps in horse and sleigh. He wore raccoon fur gauntlet gloves and mink hat. He would sometimes board the train, curl up in his coon coat and go to sleep after telling the conductor to pick him up a pullman along the line. He knew all the conductors and some hotel managers would ask him to bring his wife along and said they wouldn't charge for her.

My father liked to fish, some of those lumbermen had fishing camps on the Miramichi River with all kinds of gear, and they would invite him to go fishing and he would send a couple of big salmon home. He and Aubrey Robb would have a day's fishing sometimes. When he went to Rexton and Buctouche he would send two barrels of oysters, once they arrived on a cold night, and Robbs truckman, faithful Cass Burke, and our station master, Mr. Fitzmaurice, left their homes after supper and went down to open up the freight shed in case they froze overnight. I don't know what they cost, but when they went to $8. a barrel he stopped buying them by the barrel; then they went to $12.

When he went to the Annapolis Valley barrels of apples would arrive and; we always knew when he had been doing business with Moirs. Once he came home with a canoe. Around 1910 he came home with it from the Fredericton Exhibition. It had taken first prize, had air chambers running along each side, and was unsinkable. With care it lasted all our lives. He often went to the Island, and from Digby to St. John when it was very rough, but was never seasick. He sold lots of boilers and engines to Halifax and St. John cities, covered Cape Breton, thought the Bras d'Or lakes beautiful, but when I once asked him what was the prettiest drive in Nova Scotia he said oh over the Boar's Back at sunset. He said he had travelled by stage coach below Halifax before there were trains there. He was at the Buffalo Exhibition, think that D.W. went too; I don't know the year.

Long distance was forever calling him. I can hear him booming into the telephone now. "Get off the line I'm talking long distance I can't hear; get off the line." Once he said: "Never unpack my valise." He had got away without his collar box with the space for studs on top and handkerchiefs under and jack-in-knife. Dad had a good memory. D.W. Robb thought he should write more things down, but he said he had them all in his head and didn't need to. We had dozens of his little diaries;he always

carried one to know where he had been at a certain time, the weather, and some prices, but that was all. Catholic schools and colleges bought Robb boilers and at Christmas he would get a Christmas card from the Mother Superior; he was brought up Presbyterian. He received an envelope in the mail once addressed in large handwriting to JOHN HEDLEY VICTORIOUS MOORE. He was named after Hedley Vickers. Dad never stayed up at night playing cards. He said he didn't have time; he had to be up and out in the morning attending to his business when the other travellers would be just getting around.

We always had to pray for his safe return. The nearest accident he had, to my knowledge, was in Halifax. He said his mind was so on his business that he failed to see an approaching street car or tram, nor hear the gong. The conductor said: "Didn't you hear that gong? I rang and rang." By the time he realized what was happening it was too late to jump anyplace but onto the cowcatcher in front and put both arms around and grab something to hang on to. The conductor ran out and was amazed to see him unhurt. He said, "You must have great presence of mind."

Some place along the way he met Max Aiken and I heard him tell mother in later years that Mr. Aiken had said to him. "You'd better come along with me; I think we could run a business between us." and she said "and I could tell you how it would have ended. Max Aiken would have all yours and you would end up with nothing." He just grinned and said "that's what I was afraid of."

My father liked horses. He bought one in the spring, fattened it and sold it in the fall. He would come home Friday, cut the side lawn and banks without a power mower, harness the horse and drive 21 miles to our cottage in Northport. Monday morning he would drive back. Robbs truckman, Cass Burke, would feed the horse while he was away. One time he got a race horse and they warned him, and he warned mother, not to touch him with the whip, but one day mother took Grandma for a drive and she said, "Let's put him out"and with that she grabbed the whip. Mother said - the fool - Well before they got that horse stopped they were both on their knees on the bottom of the wagon pulling for all they were worth, so Dad sold the horse.

He never enjoyed driving a car. The first one was a McLaughlin Buick Number 205 on a tin disc. It had 1/2 doors and a rubber horn, he wore the usual cream duster, leather cap with ear flaps up or down,and goggles. The second car you made license plate and put it on. Robbs made his, but the next year the Government put them out. He never used cars in his business. If he had to go further than the trains, someone met him with a fast horse. He liked to garden, and would write from the Annapolis Valley to be ready to plant when he got home only to find that we were always two weeks behind in our climate.

My father bought Fred Robbs house on Lawrence Street, now torn down, in 1896. He was married in 1890 to Gertrude Hewson, daughter of Silas Hewson. The house had a spruce hedge on three sides and a big barn. I once saw Dad and a man stand at one end of our diningroom and shoot a rifle through the dining room, butler's pantry, kitchen and long woodhouse into the 2" thick door, and my mother take the rifle and hit the bull's eye, much to the amusement of the man. I don't know whether my father was buying or selling the rifle. He used to shoot partridge and some ducks.

The N.B. Hon. Leonard O'Brien's father had a mill at Nelson, New Brunswick. I was with my father once when Leonard, as a young man, met us and drove us across the river to his father's house to dinner. I remember Dad told mother that Leonard O'Brien was one of the few boys that he knew who would be capable of taking over their fathers' businesses when they were gone. That was in 1916. I see by the Mount Allison Record that Mr. O'Brien had an exhibition of his paintings depicting lumbering as it was in the past and it said the authentic scenes already have historic value. You might get a picture in your History of Robbs if you asked him. Robbs no doubt was of some benefit to them in the past.

My father's activities about town seem to have been acquiring real estate. He started with buying and renting some small houses near Robbs,then decided to concentrate in one locality and since Mother's father had once built a house and store on Victoria Street he progressed from there and when F.G. Spencer was looking for land for a theatre and some interested party, he decided to build. He was away most of the time, but had a building inspector on the job. It was horseshoe shaped with a balcony and three large boxes on each side, sloping floor, stage with dressing rooms below. A real theatre. They received many compliments for it from visitors in town. It was opened in December, 1911 and burned in 1917 - the night an Amherst local group had put on a large musical show. They blamed cigarettes. It was a fine show. Amherst always had a lot of musical talent. It was rebuilt on the same walls. It didn't burn by itself the nexttime, but caught from the wooden block in front where the arcade was. Amherst did not have a pumper at that time and could not get the water up to the theatre ceiling where the fire got in first. The block walls still stood. That was in 1936, and my father died in 1932.

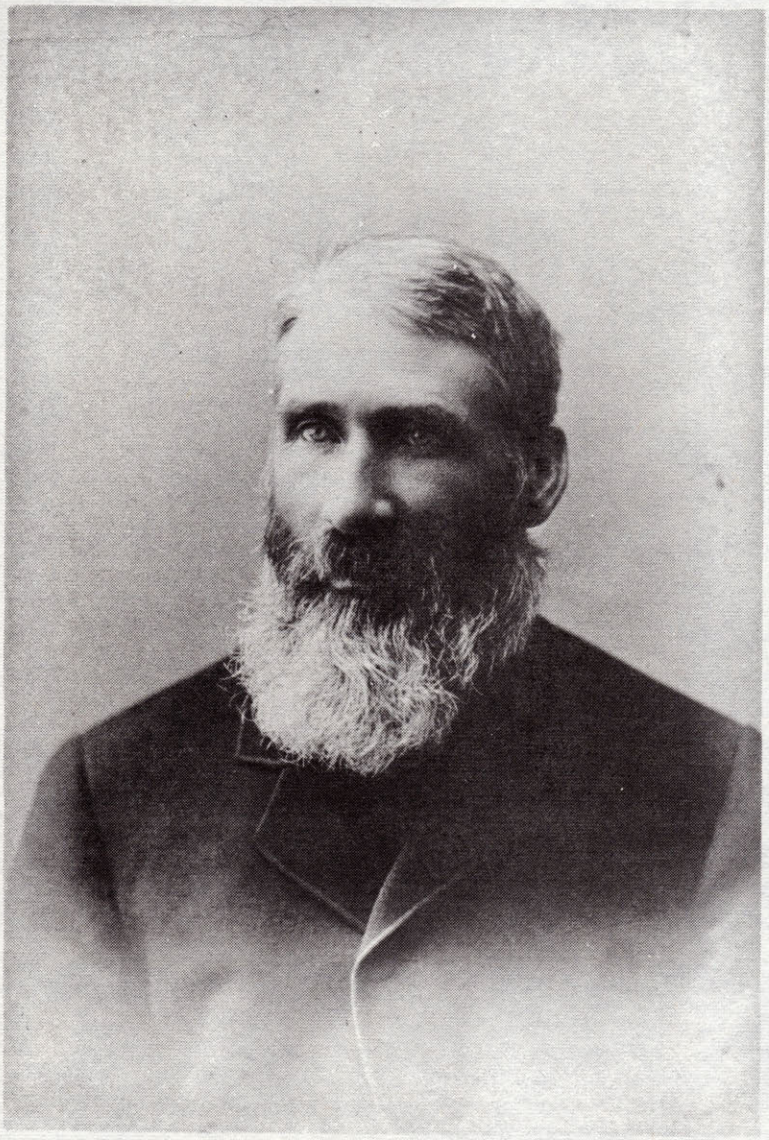
In the early '20's Robbs laid off their traveller and I believe Mr. McKenzie became Sales Manager. Later some of the workmen said if they got Johnny Moore back he might bring them in some business, but my father said to us it wasn't so, there just wasn't any mills.

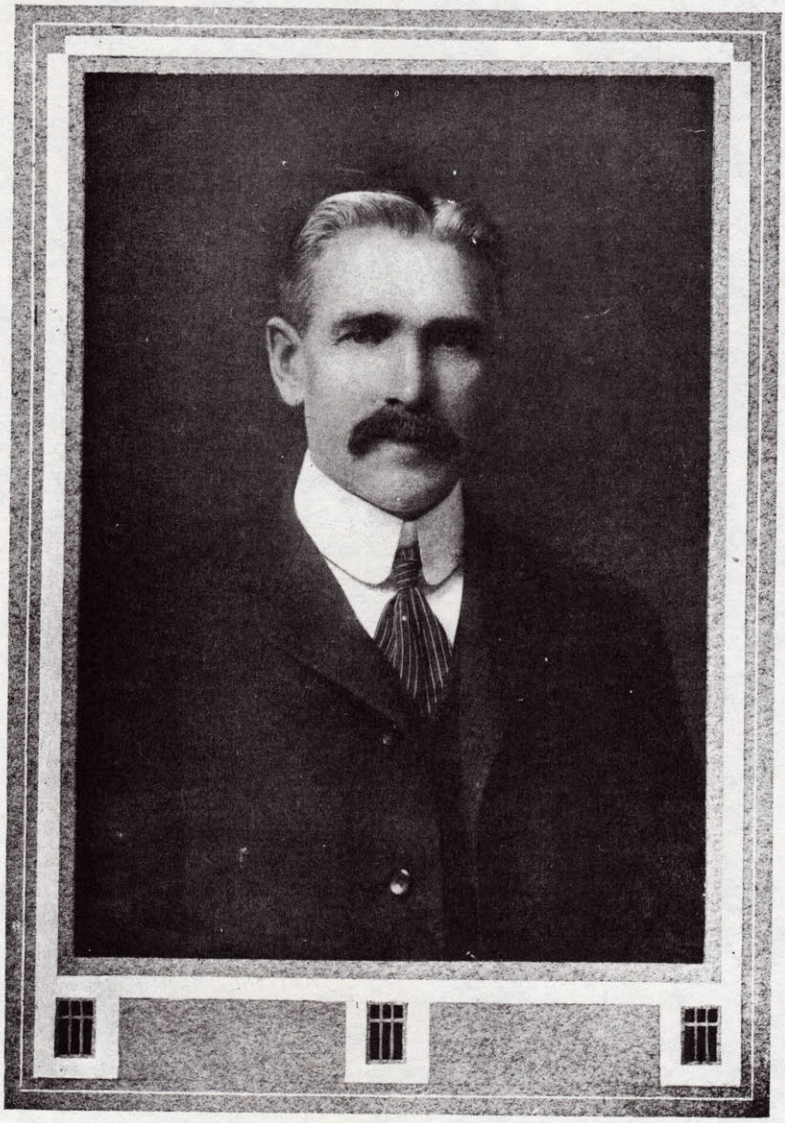
In "Under Two Flags" I remember no mention was made of William (Billie) Fraser. I believe he was a foreman in the machine shop. I know he was there for some years, but left for health reasons and was a Government Customs Inspector in Amherst. He lived on Dale Street;in later years he had a trip out West. I believe he went alone. I remember his wife told us of all the men he ran into and looked up in different places, who had received their early training at Robbs. They gave him a great time. His only child died.

When they built the first theatre F.G. Spencer offered the public $25. for a name. He and Dad sat over the fireplace drawing names out of a big bag. There were so many they got tired of reading; finally Mr. Spencer says, "Well we'll name it the next one we draw." It was Empress.

PICTURES

1. Alexander Robb 1827 - 1891
2. David W. Robb 1856 - 1934
3. Letterhead with illustration of Stove.1886
4. Letterhead with picture of an early engine 1895
5. Franklin Stove - About 1880
6. Sawmill
7. Sawmill engine and boiler
8. Emil Wolf 1860 - 1954
9. John O'Neill 1874 - 1961
10. Main Building 1885
11. Marine Boilers for Export to the United States
12. Tandem Compound Engine
13. Vertical Cross Compound Engine
14. The Saskatoon Engine
15. Map of Amherst about 1870





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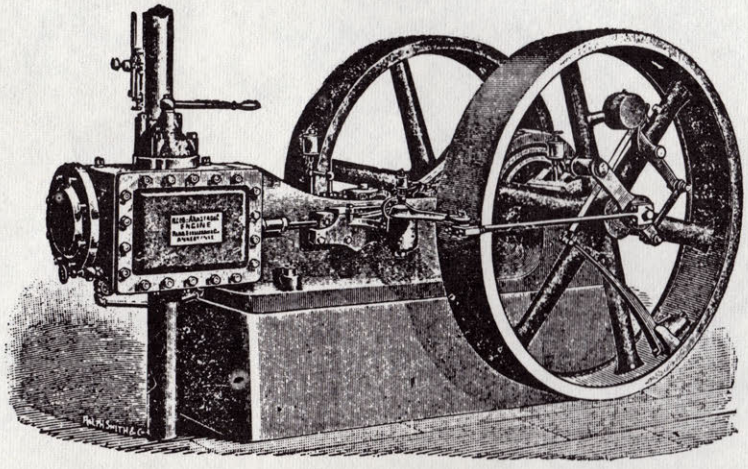

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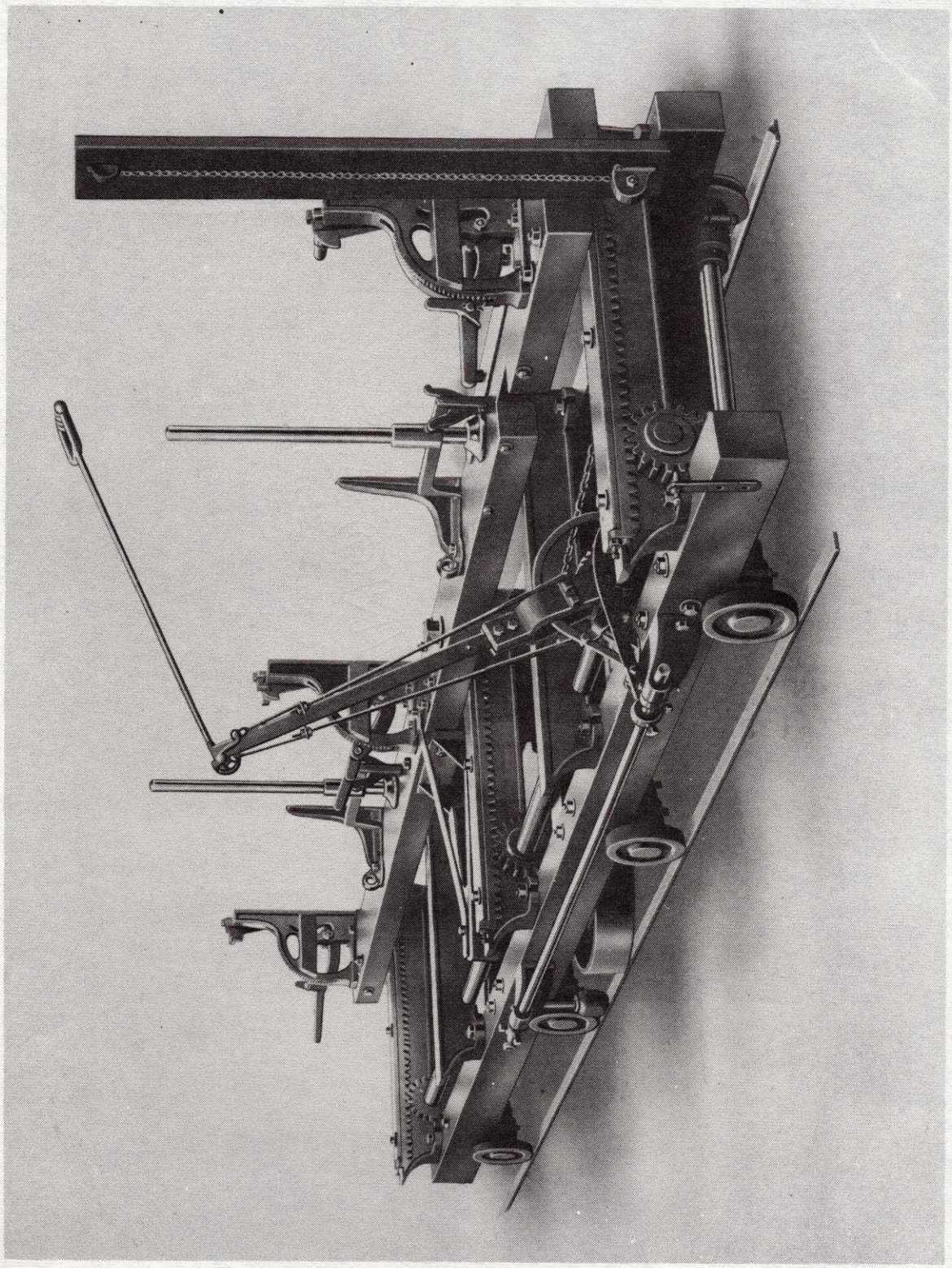

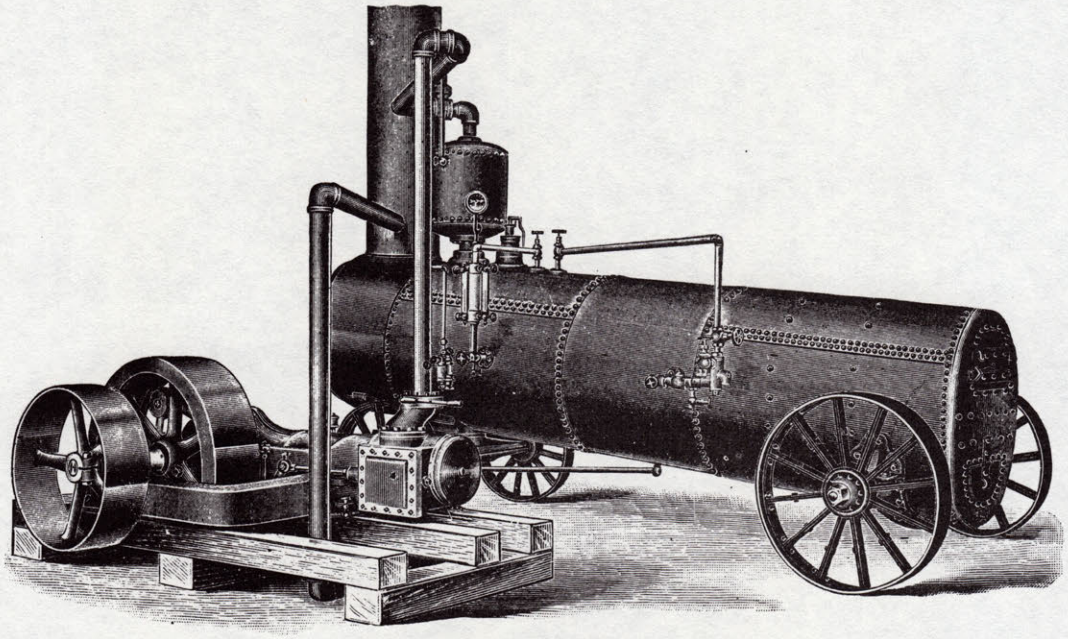

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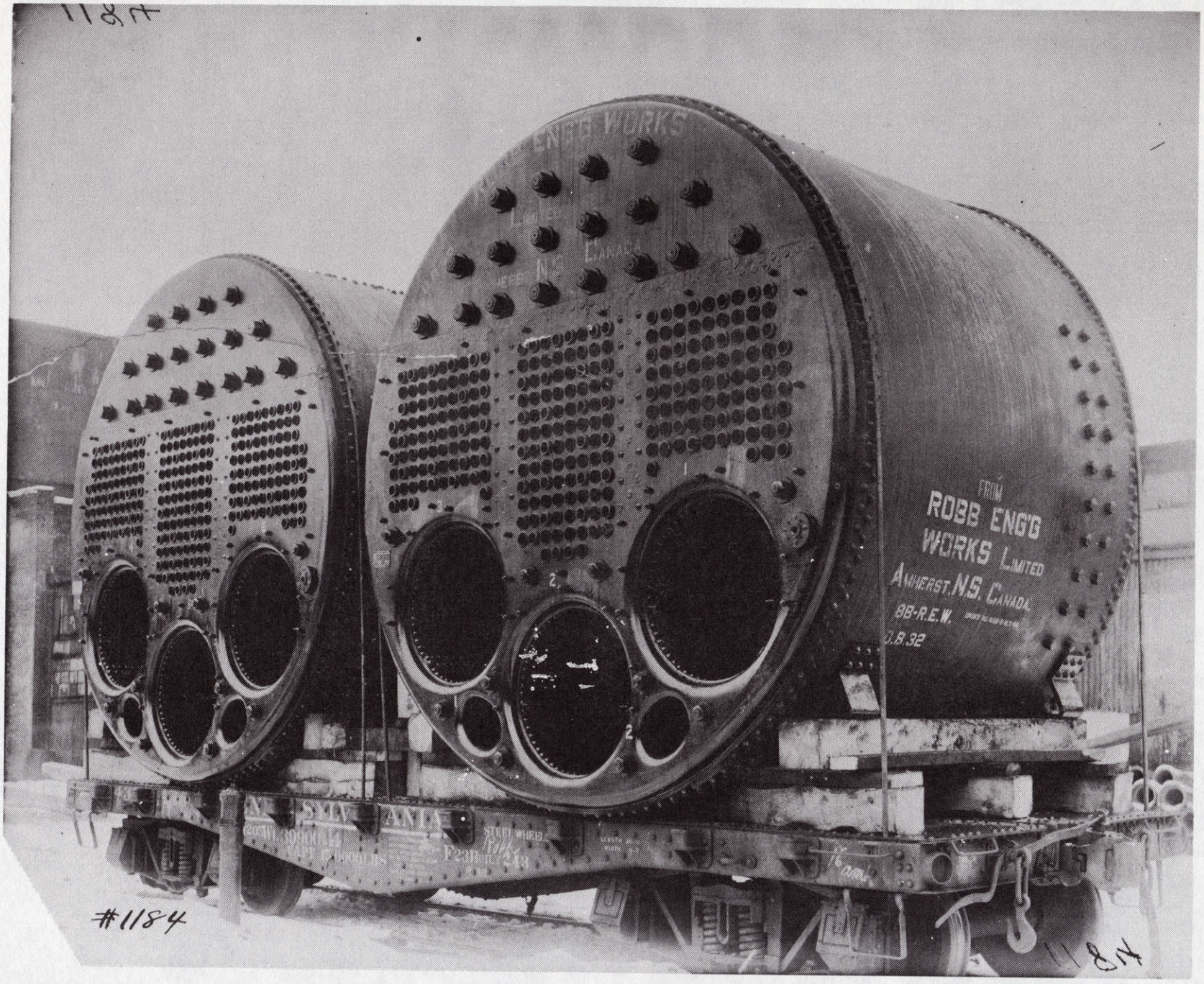
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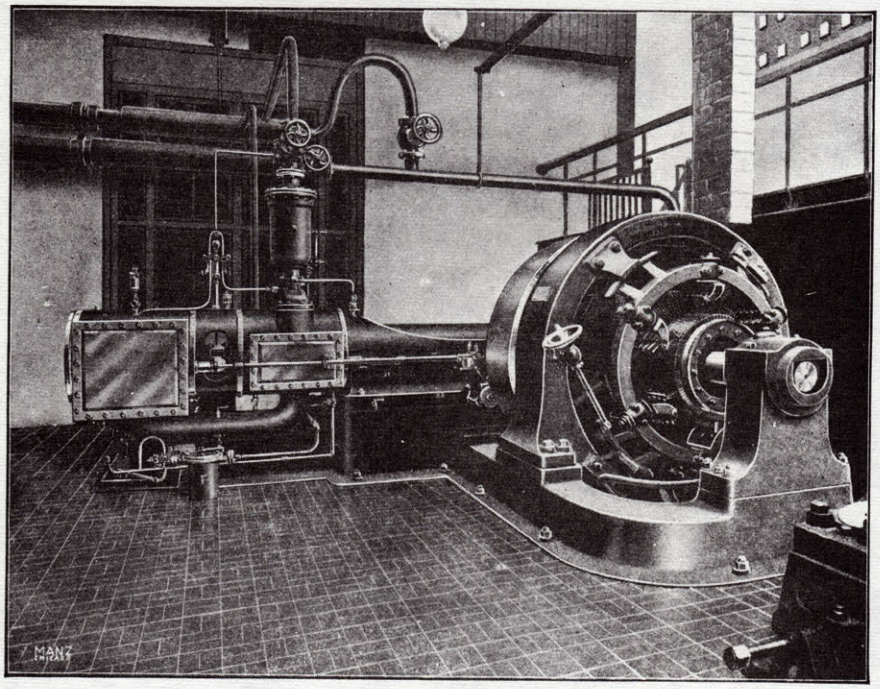
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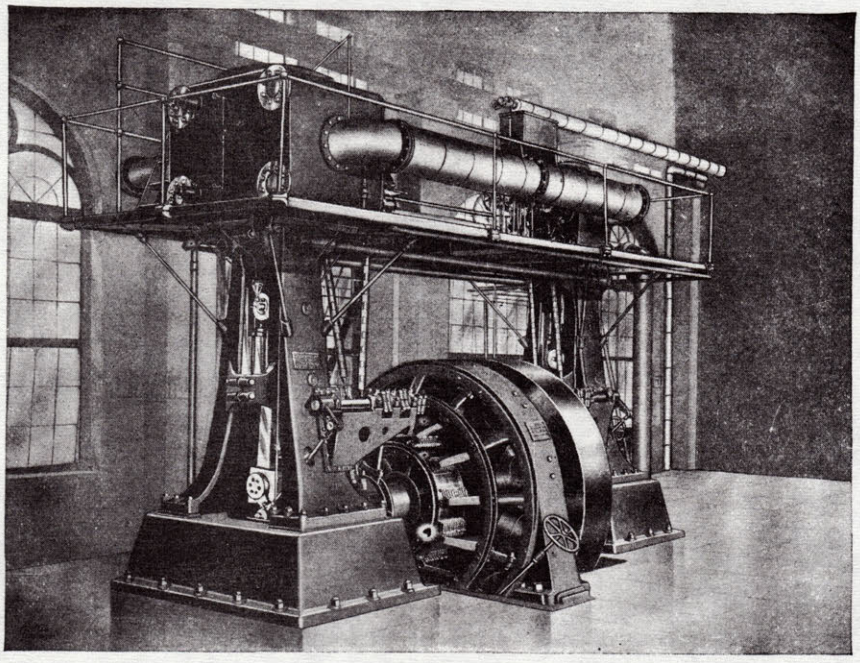

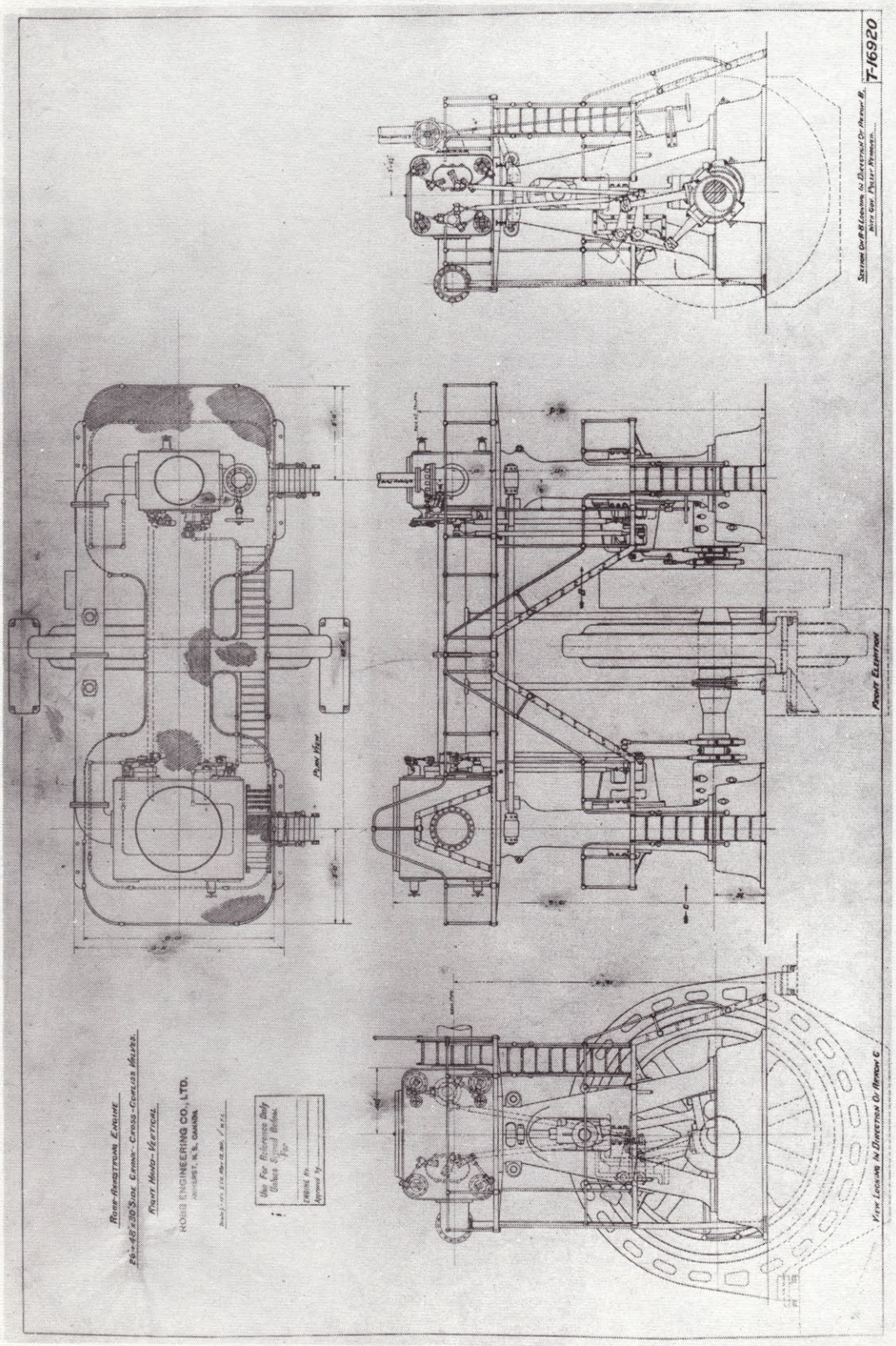
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